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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,993	01/15/2002	Christopher B. Marshall	GB 010202	6336

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EXAMINER	
APPIAH, CHARLES NANA	
ART UNIT	**PAPER NUMBER**
2686	

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/046,993	MARSHALL ET AL.	
	Examiner	Art Unit	
	Charles Appiah	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 8, 9, 10, 12, 11, 13, 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ziegler (U.S. Patent No. 6,711,151**) in view of **Palmer et al. (6,295,461).**

Regarding claim 1, Ziegler discloses a communications system comprising a beacon device (master device) capable of wireless message transmission and a portable device (slave device) capable of receiving the message transmission (see col. 1, lines 36-45). The beacon broadcasts messages using a first transmission technique, which, provides a series of inquiry messages. Different inquiry message in the series are provided on different carrier frequencies (see col. 2, lines 18-33). The beacon also broadcasts additional data (a page) using a spread spectrum transmission technique (frequency hopping, see col. 2, lines 34-49). Ziegler fails to teach that the additional data is broadcast using a second different transmission technique that includes a spread spectrum transmission technique.

Palmer discloses a multi-mode radio frequency network system that includes an access controller that communicates with two types of computing devices over a narrowband frequency range and a wideband frequency range, and provides synchronization for coordinating the timing of communications over narrowband and wideband frequency ranges, wherein the second type of computing device can be adapted for either frequency hopping or direct sequence spectrum communication signals over the wideband frequency range (see col. 2, lines 39-59, col. 3, lines 1-46). According to Palmer the synchronization signals comprise periodic beacon signals that include a synchronous portion for the narrowband communication signals and an asynchronous portion for communication of the wideband signal (see col. 2, lines 59-63).

It would therefore have been obvious to one of ordinary skill in the art to combine the above teaching of Palmer with Ziegler's communication system in order to provide a multi-mode wireless local area network (WLAN) which uses a combination of higher performance computing devices using wideband spread spectrum radio frequency signals and lower performance computing devices communicating using narrowband radio frequency signals as taught by Palmer.

Regarding claim 8, Ziegler discloses all of the limitations of claim 1, but does not disclose that the spread spectrum technique comprises direct sequence spread spectrum transmission. However, Palmer discloses a multi-mode WLAN communication system, which provides synchronization for coordinating the timing of communications over narrowband and wideband frequency ranges, wherein the second

type of computing device can be adapted for either frequency hopping or direct sequence spectrum communication signals over the wideband frequency range (see col. 2, lines 39-59, col. 3, lines 1-46, and col. 5, lines 33-38).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ziegler with Palmer, such that the beacon broadcasts additional data using direct sequence spread spectrum, in order to allow the beacon to extend its communication to devices using the direct sequence spread spectrum protocol.

Regarding claim 9, Ziegler discloses all of the limitations of claim 1, and also discloses that the additional data enables a portable device and the beacon device to commence wirelessly exchanging data using the first transmission technique (see col. 2, lines 34-49).

Regarding claim 10, Ziegler discloses all of the limitations of claim 9, and also discloses that the additional data enables a portable device and the beacon device to commence wirelessly exchanging data using the first protocol without use of the inquiry messages (see col. 2, lines 34-49).

Regarding claim 11, Ziegler as modified by Palmer discloses all of the limitations of claim 1. Furthermore, the combination of Ziegler and Palmer, as set forth above in claim , would result in the system comprising a portable device of a first type (a narrowband capable computing device) and a portable device of a second type (a wideband capable computing device), where the portable device of the second type (wideband) would receive the inquiry messages and the additional data, and the

portable device of the first type (narrowband) would receive the inquiry messages but not the additional data.

Regarding claim 12, Ziegler discloses all of the limitations of claim 1, and also discloses that the first transmission technique comprises Bluetooth messaging see col. 1, lines 36-45).

Regarding claim 13, Ziegler discloses all of the limitations of claim 12, and also discloses that the beacon broadcasts a series of inquiry messages on a predetermined clocked succession of frequencies and clock information for the beacon is included in additional data broadcasted by the beacon using a spread spectrum transmission technique (see col. 2, lines 17-33 and col. 2, line 62 – col. 3, line 10).

Regarding claim 16, Ziegler discloses a beacon device (master device) capable of wireless message transmission and for use in a communications system comprising the beacon device and a portable device (slave device) capable of receiving the message transmission (see col. 1, lines 36-45). The beacon broadcasts a series of inquiry messages arranged according to a first transmission technique, and additional data (e.g., a page) using a spread spectrum transmission technique (frequency hopping (see col. 2, lines 18-49). Ziegler fails to teach that the additional data is broadcast using a second different transmission technique that includes a spread spectrum transmission technique.

Palmer discloses a multi-mode radio frequency network system that includes an access controller that communicates with two types of computing devices over a narrowband frequency range and a wideband frequency range, and provides

synchronization for coordinating the timing of communications over narrowband and wideband frequency ranges, wherein the second type of computing device can be adapted for either frequency hopping or direct sequence spectrum communication signals over the wideband frequency range (see col. 2, lines 39-59, col. 3, lines 1-46). According to Palmer the synchronization signals comprise periodic beacon signals that include a synchronous portion for the narrowband communication signals and an asynchronous portion for communication of the wideband signal (see col. 2, lines 59-63).

It would therefore have been obvious to one of ordinary skill in the art to combine the above teaching of Palmer with Ziegler's communication system in order to provide a multi-mode wireless local area network (WLAN) which uses a combination of higher performance computing devices using wideband spread spectrum radio frequency signals and lower performance computing devices communicating using narrowband radio frequency signals as taught by Palmer.

Regarding claim 19, Ziegler discloses all of the limitations of claim 16, and also discloses that the first transmission technique comprises Bluetooth messaging (see col. 1, lines 36-45).

Regarding claim 20, Ziegler discloses a method of communicating between a beacon device (master device) and a portable communications device (slave device see col. 1, lines 36-45). The method comprises transmitting a series of inquiry messages arranged according to a first transmission. Different inquiry messages in the series are provided on different carrier frequencies (see col. 2, lines 18-33). The

method also comprises broadcasting additional data (e.g., a page) using a spread spectrum transmission technique (frequency hopping see col. 2, lines 34-49). Ziegler fails to teach that the additional data is broadcast using a second different transmission technique that includes a spread spectrum transmission technique.

Palmer discloses a multi-mode radio frequency network system that includes an access controller that communicates with two types of computing devices over a narrowband frequency range and a wideband frequency range, and provides synchronization for coordinating the timing of communications over narrowband and wideband frequency ranges, wherein the second type of computing device can be adapted for either frequency hopping or direct sequence spectrum communication signals over the wideband frequency range (see col. 2, lines 39-59, col. 3, lines 1-46). According to Palmer the synchronization signals comprise periodic beacon signals that include a synchronous portion for the narrowband communication signals and an asynchronous portion for communication of the wideband signal (see col. 2, lines 59-63).

It would therefore have been obvious to one of ordinary skill in the art to combine the above teaching of Palmer with Ziegler's communication system in order to provide a multi-mode wireless local area network (WLAN) which uses a combination of higher performance computing devices using wideband spread spectrum radio frequency signals and lower performance computing devices communicating using narrowband radio frequency signals as taught by Palmer.

4. Claims 2-7, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ziegler and Palmer et al** and further in view of **Comer (U.S. Patent No. 6,154,648).**

Regarding claims 2 and 17, Ziegler as modified by Palmer disclose all of the limitations of claims 1 and 16, and the inquiry messages are inherently each in the form of a plurality of predetermined data fields since they are inquiry messages conforming to the Bluetooth specification. Ziegler and Palmer do not disclose that the beacon adds to each inquiry message prior to transmission an additional data field for the additional data.

However, Comer teaches the concept of adding additional data fields to messages for the purpose of transmitting additional data (see col. 20, lines 35-51).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ziegler and Palmer with Comer, such that the beacon adds to each inquiry message prior to transmission an additional data field for the additional data, for the purpose of transmitting additional data.

Regarding claim 3, Ziegler in view of Palmer and Comer teaches all of the limitations of claim 2, and Comer also discloses that the additional data field is added at the end of a message (see Figure 2a).

Regarding claims 4 and 18, Ziegler in view of Palmer and Comer teach all of the limitations of claims 2 and 17, and Comer also discloses that an indication (a flag bit 57) is included in one of the predetermined data fields to denote the presence of the additional data field see col. 20, lines 45-51).

Regarding claim 5, Ziegler in view of Palmer and Comer teach all of the limitations of claim 2, and the feature of the additional data field carrying at least 64 bits of data is merely a design choice.

Regarding claim 6, Ziegler in view of Palmer and Comer teach all of the limitations of claim 2. In addition Palmer teaches the capability of using direct sequence spread spectrum transmission technique (see col. 5, lines 33-38). and Ziegler discloses that the message, including the additional data, is spread using a spread spectrum transmission technique (see col. 2, lines 18-33).

Regarding claim 7, Ziegler in view of Palmer and Comer teach all of the limitations of claim 6, and the feature of the data being 91 kb/s spread at a rate of 1 Mb/s with an 11 bit code is merely a design choice.

5. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ziegler and Palmer et al** and further in view of **Sugar et al. (U.S. Patent Application Pub. No. 2002/0061031).**

Regarding claim 14, Ziegler as modified by Palmer discloses all of the limitations of claim 1, but do not disclose a mobile communication device for use in the system, where the device comprises a receiver capable of receiving the short-range inquiry messages and the additional data, and the device comprises means for reading the additional data and presenting it to a user.

However, Sugar teaches that mobile communication devices comprising displays such as cell phones and palm computers often operate in a Bluetooth system. See page 1, paragraphs 0003 and 0004.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ziegler and Palmer with Sugar, such that the combination invention is used in a mobile communication environment and the slave devices are mobile communication devices which comprise means for presenting additional data broadcast by the beacon to a user, in order to provide the advantages of Ziegler's invention (i.e., frequency hopping synchronization) to the mobile communications environment.

Regarding claim 15, Ziegler in view of Palmer and Sugar teaches all of the limitations of claim 14, and Ziegler also discloses that the receiver receives messages according to Bluetooth protocols. See col. 1, lines 36-45.

6. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Vaisanen et al. (U.S. Patent No. 6,560,443)** in view of **Palmer et al, 6,295,461).**

Regarding claim 20, Vaisanen discloses a method of communicating between a beacon device (access point) and a portable communications device (a multi-transceiver mobile terminal). Since the portable communications device may operate in a Bluetooth communications system, it is inherent that a series of inquiry messages are transmitted arranged according to a first transmission technique (Bluetooth), and that different inquiry messages in the series are provided on different carrier frequencies (see col. 4, lines 43-62). The method also comprises broadcasting additional data using a spread spectrum transmission technique (DSSS). The portable device receives the additional data and determines therefrom whether or not to communicate with the beacon device using the first transmission technique (see col. 6, line 36 – col. 7, line 22). Vaisanen fails to teach that the additional data is broadcast using a second

different transmission technique that includes a spread spectrum transmission technique.

Palmer discloses a multi-mode radio frequency network system that includes an access controller that communicates with two types of computing devices over a narrowband frequency range and a wideband frequency range, and provides synchronization for coordinating the timing of communications over narrowband and wideband frequency ranges, wherein the second type of computing device can be adapted for either frequency hopping or direct sequence spectrum communication signals over the wideband frequency range (see col. 2, lines 39-59, col. 3, lines 1-46). According to Palmer the synchronization signals comprise periodic beacon signals that include a synchronous portion for the narrowband communication signals and an asynchronous portion for communication of the wideband signal (see col. 2, lines 59-63).

It would therefore have been obvious to one of ordinary skill in the art to combine the above teaching of Palmer with Vaisanen's communication system in order to provide a multi-mode wireless local area network (WLAN) which uses a combination of higher performance computing devices using wideband spread spectrum radio frequency signals and lower performance computing devices communicating using narrowband radio frequency signals as taught by Palmer.

Regarding claim 21, Vaisanen discloses all of the limitations of claim 20, and also discloses that the additional data enables the portable device to establish

communication with the beacon device without use of the inquiry messages (see col. 4, lines 43-62).

Regarding claim 22, Vaisanen discloses all of the limitations of claim 20, and also discloses that the first transmission technique comprises Bluetooth messaging (see col. 4, lines 43-62).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zyren (6,377,608) discloses a pulsed beacon-based WLAN communication system.

Haartsen (6,574,266) discloses a system and method for establishing an ad hoc communication session between remote communication terminals.

Young (US 2003/00635655) discloses a system for establishing Bluetooth communications.

Morrow, Jr. (5,022,046) discloses a data packet communication system for using narrowband and wideband signaling.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Appiah whose telephone number is 703 305-4772. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CHARLES APPIAH
PRIMARY EXAMINER

CA